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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,908	03/25/2002	Hisatoshi Kishi	220012US2PCT	8941

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EXAMINER

MACCHIAROLO, PETER J

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 08/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/088,908	Applicant(s) KISHI ET AL.	
	Examiner Peter J Macchiarolo	Art Unit 2875	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 1-8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on March 25, 2002 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the Examiner.

Specification

2. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification can be found at page 1, line 12 of the instant specification.

3. Furthermore, the disclosure is objected to because of the following informalities: the Specification recites on page 4 line 24 that a "spring loaded clip 5 as shown in FIG. 5." However, reference numeral 5 is not in figure 5. Appropriate correction is required.

Drawings

4. The drawings are objected to because:

5. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

6. The drawings are objected to under 37 CFR 1.83(a) because they fail to show essential subject matter, such as the cell-type electrodes, and the display cell, and the relationship between

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the pin electrodes and the cell-type electrodes, as described in the specification. Further, the Specification recites on page 9, lines 23-25 that the pin's upper section 10a has a smaller diameter than the lower section 10b. However, figure 5 shows the opposite configuration. Any structural detail that is essential for a proper understanding of the disclosed invention should be properly shown in the drawing. MPEP § 608.02(d).

7. Further, the drawings are objected to under 37 CFR 1.83(a) because the drawings must show every feature of the invention specified in the claims. Therefore, the cell-type electrodes, and the display cell as claimed in claims 1 and 5, and first applying frit seal to a side face of the rear panel followed by applying frit seal to the pin electrodes as claimed in claim 5 must be shown or the features canceled from the claims. No new matter should be entered.

8. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

9. Claims 1-8 are objected to because of the following informalities: The claims contain numerous errors and are not written in proper idiomatic English to conform with current U.S. practice. The claims should be revised carefully in order to comply with 35 U.S.C. 112, second paragraph so as to be clear and exact. An example of unclear, inexact terms used in the claims can be found at line 21 in claims 1 and 5. The limitation, "burning the whole of components" is interpreted by the Examiner to indicate that the frit seals along the edges of the flat panel display and on the electrode pins are dried. Further, at line 6 in claims 1 and 5, the term "inwardly" is a

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relative term of degree that requires additional probing through the specification and drawings for properly defining Applicant's structure. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first and second paragraphs of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention.

11. The specification does not clearly define the pin electrodes. Nevertheless, one of ordinary skill in the art can extrapolate from the specification that the pin electrodes are attached to an electrical terminal on the front panel and provide voltage to the cell-type electrodes. The instant specification, however, cannot be reasonably linked to the drawings, as evidenced by the description of recesses, found at page 2 lines 35-39. Therefore, one of ordinary skill will not be able to understand how the pin electrodes provide voltage to the cell-type electrodes with the recited structure and shown in figure 8.

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12. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

13. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

AS BEST UNDERSTOOD, THE FOLLOWING PRIOR ART REJECTIONS APPLY

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1, 4, 5, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Urakabe et al (USPN 6,208,084; "Urakabe").

15. In regards to claims 1 and 5, Urakabe discloses in figures 1 and 3, a light emitting display panel including a transparent front panel (101), a rear panel (100) arranged in parallel to the front panel and having a plurality of recesses, a pin electrode (111) projected inwardly in a state of penetrating the rear panel, and a pair of cell-type electrodes (108, 110) which works at the presence of voltage from the pin electrodes, arranged at every area of the front panel facing each of the recesses of the rear panel. Urakabe further discloses a frit seal (114) is applied to the pin electrodes when the rear panel is pressed against the front panel to keep them in contact with one

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another, and the frit seal is then dried¹, to fix provisionally the rear panel to the front panel.

Urakabe further discloses in figure 2 that the frit seal is also applied to an end of the front panel and a side face of the rear panel and the frit is then dried.

16. Urakabe is silent to a specific method of manufacturing the light emitting display, or using a flat plate to compress the front and rear plates.

17. However, the Examiner takes Official Notice that using a flat plate, which is shaped to conform to a specific contour, to compress a front plate and a rear plate together is old and well-known expedients in the art.

18. Furthermore, while Urakabe is silent to a specific method of manufacturing such a device, and the steps of applying frit seal, drying the frit seal, detaching the flat plate, applying frit seal, and drying the components are very broad, the structure disclosed by Urakabe meets Applicant's recited method step limitations.

19. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the light emitting display panel of Urakabe with Applicant's method recited in claims 1 and 5, since these method steps are obvious in light of the resultant structure.

20. In regards to claims 4 and 8, Urakabe teaches all of the recited limitations of claim 1 and 5 (above).

21. Urakabe is silent to the frit seal, which is applied to the end of the front panel and the side face of the rear panel, has "flowability" less than the frit seal applied to the pin electrodes.

¹ Urakabe, column 9 lines 54-55.

22. However, this is an obvious configuration, since the frit seal which is applied to the side face of the rear panel needs to come to rest on the side surface and not flow off of the side of the panel, while the frit seal applied to the pin electrodes needs to have high flowability in order to penetrate and flow into the pin electrode holes to adequately seal the pin electrodes to the rear panel. Further, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

23. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the light emitting display panel of Urakabe with Applicant's method recited in claims 1 and 5, including the frit seal which is applied to the end of the front panel and the side face of the rear panel has flowability less than the frit seal applied to the pin electrodes, since this configuration is needed to properly and efficiently manufacture the display panel.

24. Claims 2, 3, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Urakabe in view of Takahara et al (USRE 37,219; "Takahara").

25. In regards to claims 2, 3, 6, and 7, Urakabe teaches all of the recited limitations of claims 1 and 5 (above).

26. Urakabe is silent to securing the flat plate to the base plate by screws.

27. However, Takahara discloses in figures 3e and 4, a method of manufacturing a light emitting display panel comprises the steps of placing both of the front panel (31) and the rear panel (32) stacked to the front panel on a base plate (14) having a flat face, and securing the flat

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plate (21) to the base plate by screws (22a, 22b) through a plurality of biasing means (23a, 23b).

Takahara further teaches that this method of manufacturing a light emitting display panel allows for manufacturing a light emitting element with uniform thickness for a large display area².

28. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the light emitting display panel of Urakabe with Applicant's method recited in claims 1 and 5, including Takahara's method, since it is well known in the art that having a light emitting element with uniform thickness in a large display area is crucial for successful sales of a light emitting display panel.

Conclusion

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

30. Takahara is evidence that the method of pressing a flat plate, which is conformed to the contours of a back substrate, is well known in the art.

31. Ito et al (USPN 6,323,596; "Ito") and Kishi et al (USPN 6,555,960, a U.S. equivalent to EP 0 991 099; "Kishi") both disclose a planar display panel that has a structure and pin electrodes very similar to Applicant's invention. However, Ito and Kishi are silent to an exact method of manufacturing the device.

32. Kishi et al (USPN 6,528,944, a U.S. equivalent to EP 0 991 098; "Kishi'098") discloses a flat panel display with a specific sealing technique of the front and rear panels. However, Kishi'098 is silent to pin electrodes.

² Takahara, column 3 lines 65-67.

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33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (703) 305-7198.

The examiner can normally be reached on 8 - 4:30, M-F.

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

35. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

pjm
August 8, 2003



THOMAS M. SEMBER
PRIMARY EXAMINER